

188,068



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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/188,068 01/26/94 CHEN

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S B2750	
EXAMINER	
MOISE, E	
ART UNIT	PAPER NUMBER
	2

2306
DATE MAILED:

09/02/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1 and 2 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1 and 2 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

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Art Unit: 2306

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 C.F.R. § 1.81.

2. The disclosure is objected to because of the following informalities: On page 4, line 23, "s" should be deleted in "retains". On page 5, line 8, "are" should be replaced with "is". On page 10, line 16, applicant is requested to check the result (-0110110) of the subtraction (erroneous bits underlined by examiner). Appropriate correction is required.

3. Claims 1 and 2 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, in lines 17 and 18 (steps f and g), "setting a_i " lacks a proper antecedent basis since " a_i " was not previously defined;

in line 23 (step k), "said" should apparently be deleted.

In claim 2, in line 21 and 22 (steps g and h), "setting a_i " lacks a proper antecedent basis;

in line 26, (step i), "said" should apparently be deleted.

Art Unit: 2306

4. 35 U.S.C. 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

Claims 1 and 2 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in the two-step test given by In re Freeman 197 USPQ 464 (CCPA 1980), as modified by In re Walter 205 USPQ 397 (CCPA 1982) and In re Abele 214 USPQ 682 (CCPA 1982). See In re Meyer 215 USPQ 193, 198 (CCPA 1982).

Consonant with these decisions, a determination as to whether or not the claim directly or indirectly recites a mathematical algorithm must be made. As is readily apparent from a reading of the claims on appeal, the steps of:

- . aligning ...
- . defining ...
- . subtracting ...
- . setting ...
- . inverting ...
- . shift ...
- . adding ...

directly recite a mathematical algorithm (see specification, pages 6-8).

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Art Unit: 2306

A statutory claim should recite an automated machine implemented method. Computer elements that perform each of the steps should be explicitly recited. In other words, the claims should be tied into a specific structural device.

Once the first step of the Freeman-Walter-Abele is met, the claims as a whole must be analyzed as to whether or not they preempt the algorithm. See In re Abele 214 USPQ 682, 685 (CCPA 1982). In order to make this determination, the claims should be viewed without the mathematical algorithm to determine if what remains is otherwise statutory, see In re Abele 214 USPQ 682, 686 and In re Grams 12 USPQ 2d 1824, 1827. Rewriting claims 1 and 2 without the mathematical steps yields a non-statutory subject matter.

Taking each claim as a whole we have a field of use limitation at line 1 of claims 1 and 2.

The language "In a system for digital information process" in the preamble of claims 1 and 2 does not transform the claimed subject matter into statutory subject matter. The recital is merely a field of use or desired end use limitation.

A mathematical algorithm is not made statutory by "attempting to limit the use of the formula to a particular technological environment." Diehr, 450 U.S. at 191, 209 USPQ at 10. Thus, "field of use" limitations in the claim preamble are insufficient to constitute a statutory process.

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Art Unit: 2306

It is readily apparent that when claims 1 and 2 are taken as a whole, the claims are directed to the preemption of a mathematical algorithm and thus are non-statutory.

5. The prior art made of record, although not applied against the claims, is considered relevant in showing systems that are apparently related to the claimed invention.

Nash et al. (5,012,439)

Miyoshi (4,891,780)

Davidian (5,297,073)

Takahashi (5,097,435)

Fettweis et al. (5,341,322)

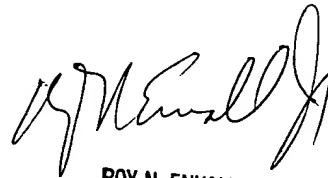
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Moise whose telephone number is (703) 305-9763.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

EM

Emmanuel Moise

August 26, 1994



ROY N. ENVALL, JR.
Supervisory
Patent Examiner
Group 2300